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HIGHLAND CATTLE.

BY

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From all accounts it appears that comparatively little is at present known about Highland cattle in the United States, and not much interest in this picturesque old breed has hitherto been manifested by our people. Inasmuch, however, as the Highland breed has some sterling points in its favor as a beef breed, it seems fitting that our farmers and stockmen should have some information concerning its history and characteristics. This breed furnishes a striking example of the effect of climatic conditions in forming a distinctive animal. The Highlander is the creature of a land of mountains and rough heaths, a great part of which is about as bleak and wild a country as can be found anywhere in the Temperate Zone. When it is considered that it was formerly the custom on many Highland farms to turn the cattle loose all the year round without other food or shelter than what was provided by a country of this description, it will be seen that a race of animals famous for hardiness must have resulted. Indeed, the Highlander may justly be termed the champion "rustler" of the cattle kingdom. It is said that he can pick up a living under conditions where other cattle would starve, and he literally carries his roof on his shaggy back. Altogether he should be rated a prominent example in his line of the useful and ornamental combined, as he is admittedly the most picturesque of the domestic animals and at the same time profitable to handle commercially, in the right localities, because of his hardy nature.

It will be gathered from the foregoing that the foremost characteristic of the Highland breed is its hardiness, and it deserves attention on this score alone. When, in addition, it is claimed that these cattle produce beef of the choicest quality, it will be apparent that they may be of much economic value in those parts of the country which are in any way similar to their native environment. Such localities no doubt exist in some of our Northern States.

In this connection it may be suggested that it is more than possible that climatic conditions eminently suitable for Highland cattle are to

^a Acknowledgment is made to Duncan Shaw, secretary of the Highland Cattle Society of Scotland; James Cameron, of Dundee, and others, for information furnished for this article.

be found in Alaska, particularly in the southern portion thereof. The sloping shores of this vast territory, together with the numerous islands adjacent, are said to abound with an almost unlimited amount of succulent forage. The proximity of the ocean to all this natural herbage renders the latter the more accessible and also causes the winter temperature of the region to be much less severe than it is inland at the same latitude. It is likely also that these cattle, owing to their active nature, rugged constitution, and strong bones, might, in addition to furnishing beef, be made very useful as work animals for this region.

When we contemplate the rapid westward trend of our cattle-feeding grounds during the past fifty years, it seems no idle fancy to predict that before many decades are past—certainly within the present century—one of the main sources of our beef supply is likely to be this same northerly territory of ours, the importance of which, from an agricultural point of view, is at present much underrated and unappreciated.

ORIGIN AND HISTORY OF HIGHLAND CATTLE.

While authorities differ as to whether or not Highland cattle were aboriginal in Scotland, some asserting that they were and others that they were not, it is known that a number of the large landed proprietors have maintained goodly herds in pure form from time immemorial, both on the mainland of the north of Scotland and in the adjacent islands to the west. The claim is also made that these cattle have preserved their ancient characteristics in a greater and more uniform degree than any other breed of cattle in Great Britain.

In the first volume of the Highland Herd Book, a yellow bull, Seillein (481), is registered as having been calved at Balranald (in the Western Isles) in 1806, and a black son of this animal, Morchuis (365), calved in 1810, is also entered in the same volume. The herd that produced these animals is said to be the oldest of the breed in existence. The Macdonalds have occupied Balranald in unbroken succession since the fourteenth century, and it is a family tradition that the cattle have always existed there. Some of the oldest mainland herds are at Poltalloch and in the Breadalbane and Trossachs country. The herd at the first-named place is said to have been founded in 1790. It is an interesting fact that there are records^a going as far back as 1822 of the annual awards to Highland cattle at Highland Society's shows.

Formerly, owing chiefly to the restricted means of travel, there were two distinct classes of the breed, namely, the West Highland, or

^a See the Highland Herd Book, Vol. III, Appendix C.

Kyloe, native to the Western Isles of Scotland, and the Highlander, or Mainland Highlander, native, as its name implies, to the mainland of the north of Scotland. Nowadays this distinction has been largely, if not wholly, done away with.

The herdbook of the breed was started in 1884 at the Highland and Agricultural Society's centenary show held at Edinburgh in that year.

CHARACTERISTICS OF THE BREED.

The form and general appearance of the Highland cattle denote extreme hardiness. The shaggy Kyloe is, perhaps, more typical in this respect than his brother of the mainland. The latter, owing to greater care in rearing, superior feeding, and pasturage, and possibly some admixture of Shorthorn blood, usually attained a larger size than the island cattle; but the Kyloe's rougher life gave him far the grander hair and horn, and, having been raised solely on nature's succulent herbs and grasses, his flesh was accounted superior, thus showing how domestication and high feeding gave weight at the expense of quality. It is likely also that inbreeding for color contributed in some measure to the dwarfing of the island cattle. In former times these cattle were nearly all black. The reasons for this selection of color are given elsewhere (p. 231).

The toughness of the Highland breed may be illustrated by mentioning the fact that out of a total of 406 cows, heifers, and calves offered at the annual pedigree sale of Highland cattle held at Oban, in October, 1903, no less than 49 of the cows were over 9 years old, and 1 was over 16 years old. The authority for this is found in the report of the subsequent annual meeting of the Highland Cattle Society, the statement having been made on that occasion. Another still more remarkable individual instance of this kind occurred at the Melfort (a well-known Argyleshire herd) dispersal sale, in May, 1904. One of the lots was the famous dun cow Orag (1390), a typical example of the old stamp of Highlander—deep, short-legged, with great bone and quality, broad back, deep quarters, and fine hair and horn. This cow, although 18 years old at the time, was nursing a heifer calf.

Thomas Farrall, of Carlisle, England, in a paper on the West Highland breed, published in the Transactions of the Highland and Agricultural Society of Scotland for 1876, states, regarding the characteristics of the breed:

Perhaps no cattle are possessed of more distinctive and strongly marked features than the West Highlanders. The following marks or characteristics stamp the genuine breed: Their limbs are short, but muscular; their chests wide and deep; their ribs well developed and finely arched, and their backs as straight as in the purebred Shorthorn; their neck and dewlap are somewhat coarse in the bull, but this is indicative of its mountain state; their horns of

good length, without approaching to the coarseness of the longhorns of the lower country, spreading and tipped with black; and all the other points are what the breeders call good. There is, indeed, much in the West Highlanders to arouse attention and win the admiration of those who love to see animals in an undomesticated state. The beautiful and imposing color of brindle, dun, cream, red, or black; the finely arched ribs and level back; the deep and well-formed chest; the splendid horn; the lively, quick, and fearless eye; the broad muzzle, and the shaggy coat impart to the Kyloes charms which are not to be found in any other British breed.

POINTS OF THE BREED.

The various points of the breed as given in the first volume of the herd book, under the authority of the editing committee at Inverness, Scotland, in 1885, are as follows:

THE HEAD.

Of all the representatives of our British bovine breeds the Highlander has the grandest and most picturesque head; it is indeed to his head that he owes his great favor among artists. As a rule, it is most proportionate to the body of the animal and is broad between the eyes, while short from the eyes to the point of the muzzle. The forelock between the eyes should be wide, long, and bushy, and any nakedness or bareness there is certain to detract from the appearance of the animal. Some would almost have the hair so wide there as to obscure the eyes, but this in many cases would be allowing one good point to overshadow another. The eyes should be bright and full and denoting, when excited, high courage. When viewed sideways there should be a proportionate breadth of the jawbones readily observable when compared with the width of the head in front, while the muzzle should, when looked at from a similar point, be short, though very broad in front, with the nostrils fully distended, and indicating breeding in every way. One of the most noteworthy features in a Highlander is, of course, the horns. In the bulls the horns should be strong and come level out of the head, slightly inclining forward and also slightly rising toward the points. Some, however, do not care for this rise, though any drooping is considered to be a very bad fault when between the crown and the commencement of the curve, as this is generally accompanied by a low, weak back. Some, too, are of opinion that the masculine appearance is slightly detracted from when the horns rise directly from the crown. This, however, can only readily be detected and commented upon when particular animals are brought before experienced judges, as within a show ring.

As regards the horns of the cow there prevail two opinions. As a rule, they come squarer out from the head than in the male, rise sooner, and are somewhat longer, though they preserve their substance and a rich reddish appearance to the very tips. The lack of the appearance of substance, or "sappiness," about the horns of the male would be very much against the animal in the show yard. The other taste is that for a female the horns of which come more level from the head, with a peculiar back-set curve and very wide sweep. A large number of enthusiastic breeders seem to prefer, by comparison, the latter, which gives possibly the more graceful appearance. In all cases, however, the horns of a Highlander, when well set, give the animal a stamp of nobility which causes it to attract the attention of any stranger who might pass heedlessly by animals of other breeds as merely cows, bulls, or, oxen.

THE NECK AND SHOULDERS.

The neck should be altogether clear and without dewlap below. It should form a straight line from the head to the shoulder in the cow, but in the bulls should have that distinct crest common to all animals of the bovine species. This crest should come gracefully down to the roots of the horns, and, being well coated with wavy hair, the masculine appearance of the animal is fully completed. The shoulder should be thick and should fill out greatly as it descends from the point to the lower extremity of the forearm.

BACK, BODY, AND HIND QUARTERS.

From behind the shoulder the back should be fully developed and beautifully rounded. Any slight sinking or hollow is most decidedly objectionable. It should also, as in the Ayrshire, be as straight as possible, and the ribs should spring boldly out and be both well rounded and deep. When measured across the hips the breadth should be very great and the quarters should be exceedingly well developed from the hips backward. The thighs should also be well developed and should show great fullness. Viewed generally the quarters should be square between the hips and the tail and from between the tail right down to between the hind feet. The legs, both before and behind, should be short and strong; the bones strong, broad, and straight; the hoofs well set in and large, and the legs well feathered with hair. The animal should be set wide between the forelegs and it should move with great dignity and style, as this is considered to be one of the most reliable evidences of careful and true breeding.

HAIR.

The hair, of which there should be a great profusion, more particularly on the parts indicated, should be long and gracefully waved, very much as in what dog breeders denote wavy-coated retrievers. To have a curl is to possess a decided fault, and one which has of late years become unfortunately too common in some folds. This has been attributed in some quarters to a growing desire to make Highlanders grow big from feeding them higher and housing them more. At any rate, experience goes far to prove that the more exposed they are the greater the profusion of the hair and the less its tendency to curl. Thus the reason of the island cattle being always so much better haired than the mainland cattle is owing to their never being housed in winter.

The usual colors are black, brindle, red, yellow, and dun, and there is considerable difference of opinion among breeders as to which is preferable. In general, as to color, it may be said that a good herd should possess a mixture, avoiding always all those which indicate unhealthy thrivers. The thickness of the skin, as in all fattening breeds, comes in for a considerable amount of attention, but it has to be borne in mind always that the Highlander has been adapted by nature to withstand great exposure.

Regarding the color of the Highland breed, it may be said that in times gone by cattle from the North and West Highlands used to be spoken of in general terms as "Black cattle." The farmers of these localities preferred the black color, as they considered it indicative of hardiness, believing that animals of this color had stronger constitutions than the others, and that there was, in consequence, more profit in them. This predilection for black, however, is now a thing

of the past. In these early days it used to be a common sight at the market centers where West Highland cattle were wont to be brought to see quite a sprinkling of reds and duns among the prevailing blacks. The choicest of the duns, creams, reds, and brindles were rapidly purchased by agents who supplied the demand for the parks of English noblemen. Owing to the striking general appearance of these cattle, this demand for ornamental purposes was quite important; some, indeed, held the opinion that in this respect the cattle were handsomer than deer.

Variety of coloring has always been popular with the mainland breeders, but occasionally a certain color will become more or less fashionable for the time being. As an instance of this, it may be mentioned that yellow has recently been the popular color with buyers.

FEEDING AND MANAGEMENT.

The soil of the Highlands is generally of a loamy character, composed largely of sand and gravel; clayey soils are rare. The climate, though not so cold in winter as in the interior of the lowlands, is much more stormy and wet and has less warmth in summer. The rainfall, particularly in the Western Highlands, is very heavy. The winters are long, there being little new vegetation until May; June, in fact, is considered the first month of the grass season.

Highland cattle are active, hardy animals which forage well on scanty pasture. A hundred years ago the average Highland farmer gave little heed to the welfare of his cattle, and few of them ever received a mouthful of dry provender during the winter or spring. Sad indeed was often their plight during prolonged snowstorms; also in the late winter and early spring, before nature began to put on her new garb. They then had to subsist upon the decayed gleanings of the previous summer's herbage. In these times cattle that had survived a particularly severe winter might be seen in early spring huddled together like lean and hungry wolves, with staring coats and sides almost clapped together. The soil afforded them no sustenance until the grasses of the valleys began to spring up, yet in about three months after the grass season set in the best of them would be quite plump and fleshy, having acquired quantities of newly laid-on beef that was unsurpassed for tenderness and flavor.

In these early days the wasteful policy of insufficiently stocking the pastures in summer in order that some remains might be left for holding the cattle over the winter was generally adopted, with the resulting loss in both provender and cattle. A writer in 1803, commenting on the losses of Highland cattle every spring because of this neglectful treatment, suggested an economical remedy, which con-

sisted in making hay out of certain coarse grasses and forage plants which the cattle did not eat in a green state—other more palatable grasses then being plentiful—but which would be relished in a dry state when other food was scarce, thus preserving both forage and cattle at little cost.

Later, as rents became less easy to make up and the price of beef became higher, this wasteful policy in managing the cattle was partly abandoned. Pastures were divided out and portions set aside for winter use, the pastures on the heights being used in mid-summer. During periods of snow in winter the farmer might be seen making his way through the storm with a bit of coarse hay for his famishing stock. It was found that the cattle did fairly well if they had some natural shelter during winter storms and a little hay, or straw even, to tide them over periods of privation.

Nowadays, of course, still more economical methods are in vogue. The modern husbandman—and he of the Highlands is as “canny” as the rest of them—knows that it does not pay to allow any checking or stunting in his growing animals. They must therefore be kept in thrifty condition throughout the winter. This is found to be an easy and inexpensive matter with Highland cattle.

The author previously quoted—Thomas Farrall, of Carlisle—said, in regard to the system of management practiced at the time he wrote (1875):

The present system of management varies very much in different districts and with the size of the herds; indeed, in the same district and under the same climatic and local influences the modes of managing the cattle in winter are somewhat different. Some of the small herds in Argyll and Perth are divided into two sections, the breeding cows being placed in one fold and the young cattle in another. The latter are supplied with straw and a little meadow hay, and a few turnips when the crop is plentiful. The breeding cattle are somewhat more liberally treated, receiving a large proportion of hay of superior quality and more turnips. Other occupiers, chiefly on the more extensive holdings, prefer to allow the yearlings and 2-year-olds to roam at large in the fields, where they have a few turnips thrown out upon a piece of clean lea ground, with a rack of hay or straw in an open shed at night. With this fare and the rough grass which they pick up in the woods it is surprising how well they keep up their condition, a fact which at once stamps the hardy character of the race. At 3 years of age the heifers are selected for breeding purposes, as it has been found that they are not mature enough at a younger period of their existence. In the winter and spring months—that is to say, in January, February, March, and April—the calves are dropped. Here may be noticed another diversity of opinion which exists. Some farmers keep the calves separated from the dams until the periodical turning out to grass, allowing them to be together for a short period three times a day; others keep them in a fold together, and although the latter system has many advantages, yet both the dam and her young become very wild and almost unapproachable when allowed full liberty. In the beginning of October the calves are weaned, and as the temperature at that season

is generally low the cows seldom suffer from sore udder, the milk having become almost dried up on account of the failing pastures. It may here be remarked that some farmers of the present day give cake to the growing calves as well as to the cattle intended for the shambles. This insures bone and rapid growth in the one case and early maturity and a highly finished state in the other, but the plan can scarcely be called a judicious one in the case of calves which have afterwards to be turned upon the bleak moors and there to subsist upon the scanty fare which nature has provided for them.

Plate 19 shows a group of cattle at Ardtornish, where there is one of the best-known herds of the Highland breed. This place is situated in the Western Highlands of Scotland, in the county of Argyll, on the shore of the Sound of Mull; the latter being a strip of water separating the island of Mull from the mainland. Here we have an excellent example of Highland cattle under typically natural surroundings.

At Ardtornish the cattle, excepting the cows, live outdoors on the wild pasture grounds all the year round. The cows are taken indoors in November. The calves arrive toward the end of winter, so that the earliest of them are large enough to follow their dams when the grass season begins. Care is taken not to let the calves out in the open pasture too soon, as the cattle are accustomed to wander over great distances, and this would be apt to overtax the young animals. The late calves are put in a convenient inclosure into which their dams are given access twice a day to suckle them.

FAT STOCK, WEIGHTS, ETC.

In the consideration of any breed of the beef type for this country the commercial aspect of the case is necessarily all-important. The average American farmer must be convinced of the profitableness of handling any particular line of live stock, otherwise he can not be expected to take it up. In order to arrive at a true estimate of the Highland breed in this respect, a comparison must be made with other beef breeds. For this purpose certain facts and figures deduced from the latest Smithfield Fat Stock Show, held in London, England, in December, 1904, are given. This show, as is well known, is the recognized supreme test of fat stock in Great Britain.

A perusal of the table presented below will show that the Highland cattle are smaller framed and mature less early than the other breeds. It should be remembered, however, that they are here brought into competition with the flower of the British early-maturing breeds, whose lives prior to their appearance in the show ring have probably been cast in radically different lines from those of the northern breed.

It would be difficult, of course, for the Highlander to compete with the early maturing breeds under conditions favorable to the

latter, but, with the conditions reversed, it is likely that the verdict of the breeder would be in favor of the hardier animal. This, however, is a matter for the practical stockman to decide for himself.

In regard to the weight column of the table: While the more pampered breeds have a considerably higher average, the Highland classes have, nevertheless, attained a satisfactory commercial size. It has, in fact, been frequently demonstrated that large steers of the Highland breed can be grown, even exceeding 2,000 pounds, as the following weights of prize winners in the Highland purebred classes of 1904 prove: At the Birmingham show a yellow steer 1,245 days old, weighing 1,738 pounds, took first honors; at Edinburgh, a white ox 1,424 days old, weighing 2,112 pounds, and a yellow ox 1,429 days old, weighing 2,036 pounds, were among the winners; at Smithfield, in the younger division, a steer 979 days old, weighing 1,549 pounds, was first, while the second, 3 months older, topped the scale at 1,667 pounds; in the older division a steer 1,308 days old, weighing 1,837 pounds, was the winner. However, outside of extremes, quality is more important than size, and the strongest claims are made for the Highland breed in this respect. The question also arises, What sort of an animal do the butchers want? According to the Live Stock Journal's critic, the sentiment prevailing at the last Smithfield show was that mammoth carcasses were no longer in favor.

Regarding the matter of early maturing, an authority on the breed states that the Highlander matures later, not because of his incapacity for earlier development, but because he is not given the chance of early maturity. The prevailing custom is not to feed him up until he is about 2 years old, and it is contended that if feeding was undertaken at an earlier age he would, in time, make as good a showing as the other beef breeds.

The table gives the average records of the steer and heifer classes of several of the more important breeds at the Smithfield show, in separate form, showing the following details: (1) The number of entries in each class; (2) the average age of the class; (3) the average weight of the class, and (4) the average daily gain. The latter is computed by dividing the total age, in days, into the total weight, in pounds.

Averages of selected beef breeds at Smithfield Fat Stock Show, 1904.

[Compiled from the London, England, Live Stock Journal.]

Breed.	Number in exhibit.	Average age.	Average weight.	Average daily gain.
Hereford—		<i>Days.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Steers	4	1,004	1,742	1.74
Heifers	4	956	1,586	1.66
Shorthorn—				
Steers	8	1,037	1,838	1.77
Heifers	4	985	1,727	1.75
Aberdeen-Angus—				
Steers	5	1,046	1,852	1.77
Heifers	4	1,055	1,673	1.59
Welsh—				
Steers	7	1,068	1,924	1.80
Heifers	5	1,054	1,575	1.50
Highland—				
Steers	6	1,019	1,470	1.44
Oxen	6	1,348	1,786	1.33
Heifers	5	1,334	1,485	1.11
Crossbred—				
Steers	6	1,015	1,823	1.80
Heifers	6	1,066	1,749	1.64

It will be noticed that the Highland classes make a strong numerical showing, in spite of the long distance of Smithfield from the native folds of the breed—a fact which speaks for their popularity. The table shows that the six Highland steers in the 3-year-old class averaged 1,470 pounds in weight. This average, however, would have been quite a little higher but for the presence of one small animal which weighed only 1,208 pounds—more than 200 pounds below any of the others. These steers made an average daily gain of practically $1\frac{1}{2}$ pounds, the small steer again bringing the average down several points. The critic of the London Live Stock Journal characterized this exhibit as “very fine.”

The average daily gains of the Highland oxen and heifers are, on account of their greater age, somewhat lower than the others, but it may be mentioned that the largest of the oxen was an excellent feeder, having averaged a daily gain of 1.46 pounds for 1,421 days. This animal was the second largest in the entire Smithfield show; his weight was 2,074 pounds, and he was just under 4 years old.

It may be here mentioned that at the Scottish National Fat Stock Show of 1904, held at Edinburgh, the champion steer was a Highlander (Errol Candidate III), which triumphed over a numerous entry of Shorthorns, Aberdeen-Angus, Galloways, and crossbreds, but he in turn was defeated by a crossbred heifer for the premier honor of the show.

THE BLOCK TEST.

In comparing the relative merits of the beef breeds it is very necessary to procure data on this important feature. Slaughter tests have been annually conducted in connection with the London Smithfield show for the past ten years, the first one having been carried out in 1895. A detailed account of this first test may be found in the Twelfth and Thirteenth Annual Reports of this Bureau, on page 326. It will be seen that the first prize on this occasion was taken by a Highlander. It should be stated, however, that this initial success of the Highland breed has not been followed up in the succeeding carcass competitions, the best showing since then having been a "reserve" in 1897; but it must be said that in several of the competitions there were no representatives of the breed entered.

The statement next following shows some details relating to the carcasses of the Smithfield cattle at the latest show, held in December, 1904. These data are compiled from reports of butchers who had purchased the cattle at the show, the object here again being to compare the Highland with other breeds. Four reports were all that were received of Highland cattle. These are all enumerated separately, and the averages of all breeds placed alongside for comparison. The Dexters are not included in the "all-breeds" columns, as their diminutive size would militate against a true average.

It was to be expected that the Highland animals would show up considerably above the average as regards weight of hide, the heavy hide being the result of their characteristic hardiness. The percentage of dressed weight to live weight is a few points in favor of the other breeds, with the exception of the finely bred Highland heifer Princess Fausta (breed champion).

Slaughter test of cattle from Smithfield Club Show, 1904.

[Compiled from London, England, Live Stock Journal.]

Description of animal.	Age.	Live weight.	Weight of dressed carcass.	Percentage of carcass to gross live weight.	Weight of hide.	Weight of loose fat.
	Days.	Pounds.	Pounds.		Pounds.	Pounds.
Highland ox (Donnacha Odhar).....	1,348	1,634	1,016	62.17	118	120
Highland steer (Sir John Swinburne's entry).....	1,019	1,568	960	61.22	143	115
Average of all breeds (steers above 2 years old).....	1,047	1,743	1,146	65.73	103	85
Highland heifer (Princess Fausta)	1,344	1,404	920	65.53	-----	-----
Highland heifer (Madam Brandon).....	1,299	1,521	958	62.98	104	121
Average of all breeds (heifers above 2 years old).....	1,043	1,488	989	66.45	76	85

- The butchers' remarks in regard to the Highland carcasses were:
The steer: "Cut full of flesh and very salable for a show beast."
Heifer Princess Fausta: "Very good beef, nicely mottled, but rather fat."
Heifer Madam Brandon: "Cut up full of flesh and very large in the kidneys."

PRICES OF PEDIGREE STOCK.

The information gathered under this head is intended to give prospective buyers or any others who may be interested an idea of the general run of the values of purebred Highland cattle. It should be understood, however, that the prices here noted were paid for the cattle at their native markets in Scotland; a considerable addition must be made to these figures to represent the cost of bringing them to this country. Probably about the lowest figure that could be reckoned on in this connection would be \$20 to \$25 per head.

Highland cattle do not command nearly as high prices as fancied specimens of the more fashionable beef breeds, such as Shorthorns, Aberdeen-Angus, or Herefords. The large sums frequently paid for representatives of the latter breeds are, in a large measure, due to the strong foreign demand for them. Argentine buyers have been especially active in the British markets of late years. The statement made in connection with the Perth Shorthorn sale of 1904 is typical of the extent of their operations. At the sale in question there was a brisk home demand for good commercial animals, but "anything over average quality at once brought out the Argentine buyers, to whom price seems no object." There being none of this fictitious character in connection with the Highland cattle sales, it is probable that a much better return on the investment can be secured with this breed than with the other breeds mentioned.

The prices brought at the three principal sales of purebred Highland cattle in 1904 are found below. The sales enumerated include the two annual official sales of the breed, namely, the spring bull sale and the fall cow and heifer sale, the third being the dispersal sale of one of the famous herds of the breed. Some particulars of the spring sale of 1905 are given also.

THE SPRING SALE, 1904.

This sale was held at Oban in February, 1904. There being a short entry on this occasion, the prices ranged higher than usual. This being an official sale, the animals in the several classes are judged, prizes being given to encourage the breeders to put forth their best efforts. There were more than three prizes in each class, but it is considered sufficient to give particulars of the first three only in each case, together with the averages of the entire sale.

Aged bulls:

(1) Victor XXII (1600), black, sold for.....	£53=	\$258
(2) Schiehallion II (1740), red, sold for.....	61=	297
(3) Donnacha Coir (1806), sold for.....	32=	156

Two-year-old bulls:

(1) Malachi (1870), sold for.....	61=	297
(2) Kildare, light dun, sold for.....	52=	253
(3) Fear-a-Ghlinne-So, sold for.....	44=	214

Yearling bulls:

(1) Waverly of Dunlossit, yellow, sold for.....	£40=	\$195
(2) Lord Clyde, brindled, sold for.....	51=	248
(3) Domhnall Mollach III, sold for.....	36=	175

The first in the two-year-old class—Malachi—was also awarded the medal for the best specimen of the breed in the sale, but the best animal from the buyers' point of view was the 2-year-old bull Royalist (1890), which was only placed fifth in his class because of being shown out of his hair. Royalist brought the top price of the day—£84 (\$409).

The complete figures and averages for the sale were as follows:

14 aged bulls averaged.....	£32=	\$156
24 two-year-old bulls averaged.....	34=	165
11 bull stirks (yearlings) averaged.....	26=	127

The averages for the previous year were considerably lower. They were:

Older bulls.....	£29=	\$141
Two-year-olds	31=	151
Stirks	18=	88

There was no demand for cows at this sale, only 1 out of 9 being sold for £10½ (\$50). Four 2-year-old heifers were sold at a shade over £8½ (\$41) each.

THE MELFORT SALE.

One of the most interesting events of recent years in Highland cattle circles was the dispersion of the well-known Melfort fold, which took place in May, 1904. The two highest prices obtained at this sale were £45 (\$219) for Molog VIII, a brindled 2-year-old heifer, and £41 (\$200) for Esther, a yellow 6-year-old cow. The summary of the sale is as follows:

30 cows averaged.....	£18½=	\$89
13 three-year-old heifers averaged.....	19½=	96
14 two-year-old heifers averaged.....	16 =	78
11 yearling heifers averaged.....	13 =	63
9 yearling steers averaged.....	11½=	55
3 stock bulls averaged.....	26½=	128

FALL PEDIGREE SALE OF COWS AND HEIFERS.

The latest annual fall sale of the cattle society was held at Oban, in October, 1904. Large numbers of cows and heifers are annually offered at this sale, but the report from which our figures are obtained does not give detailed averages. The top price of the sale was £51 (\$248), brought by the brindled Dunlossit cow Cattadale (5766). As regards the averages, judging from the prices obtained for a number of the lots, they will probably work out somewhat lower than the Melfort figures in the preceding paragraph.

THE SPRING SALE OF 1905.

A brief summary of the spring sale of 1905 is as follows:

Championship honors on this occasion were captured by a yearling bull, Coruisk, bred by John MacDonald, Duntulm, Skye. He is a red, finely matured, and wonderfully haired, and is well endowed with the typical points of a good Highland bull, having great strength of bone, grand back, long quarters, and fine head. Coruisk was sold for £60 (\$292). The first-prize aged bull at this sale, Ben Laoghal, a brindled 4-year-old bred by the Duke of Sutherland, changed hands at £59 (\$287). The second-prize aged bull sold for £36 (\$175), and the third, which was the sire of the above-mentioned champion yearling, made £46 (\$224).

The first-prize 2-year-old bull at this sale was less fancied by buyers than the other prize winners in his class. He was sold at £40 (\$195). The second in this class, Domhnall Riabhach of Airthrey, would have brought the highest price of the sale, but he was withdrawn at £62 (\$302), after a keen competition. The third-prize 2-year-old bull, a dark brindle of great substance, made £56 (\$273).

The yearling bulls at this sale were above the average. The first prize and champion—Coruisk—has already been described. Second prize was taken by the yellow bull The Gael of Dunlossit, which sold for £27 (\$131). The third was more fancied, and brought £34 (\$165).

The averages for the entire sale were:

19 aged bulls.....	£24½ = \$119
25 two-year-old bulls.....	32½ = 157
24 yearling bulls.....	21 = 102

HIGHLAND CATTLE IN AMERICA.

It has previously been intimated that there are not many representatives of this breed in the United States. So far as we know there are only two or three herds in the country. One is in Nevada and is owned by Governor Sparks; another is in the State of New York, where Mr. Van Norden has a good-sized herd which he imported a few years ago, a number of which were exhibited at the St. Louis Exposition. There are some Highland cattle at Mountain Lawn,

Bristol, N. H., also, and the Colorado Agricultural College owns one cow.

The Highland Cattle Society of Scotland^a has been conducting correspondence, with a view to encouraging the exportation of the cattle to Canada and the Northwest Territory as well as to other parts of the world.

Mr. D. Mitchel, of Putaendo, Chilean Andes, has introduced Highland cattle (two bulls and several in-calf heifers arrived safely) to improve the horned cattle on his estate. Another exportation to this region is referred to in the *Scottish Farmer* of March 18, 1905. A picture is shown of the bull Fheambar, who with 9 females were about to be shipped to Patagonia, near the southern end of South America.

THE ILLUSTRATIONS.

Plate 16—Group of Highland cattle.—These are a part of the herd, previously mentioned, at Ardtornish, Scotland. The cattle are pictured as they stood on their native soil amid their natural surroundings of rough heath, mountain, rock, and water. The projecting outline in the left background of the picture is the ruin of an ancient castle on the shore of the Sound of Mull. In olden times this was the residence of the lord of the isles. This picture is reproduced by courtesy of Country Life (England).

Plate 17, fig. 1—Calum Riabhach II of Atholl (1325).—This stylish bull, bred and owned by the Duke of Atholl, was, when in his prime, rated as one of the handsomest and best-haired specimens of the breed seen for a generation. He is a representative of the old Dubh Chiar family. He was breed champion at the Highland Cattle Society's shows of 1898 and 1899, and his son, King Alaric (1712), was the breed champion at the shows of 1903 and 1904. He also sired the heifer Princess Fausta, who is elsewhere referred to as champion of the breed at the Smithfield Fat Stock show of 1904.

Plate 17, fig. 2—Typical Highland cow.—This excellent representative of the female sex is a member of the famous herd at Ardtornish, Argyllshire Highlands, Scotland. A cow from this herd carried off the premier honors of the breed (over all entries, cows and bulls) at the Highland Cattle Society's show in 1902.

Plate 18—Sir Andrew.—Highland bull imported and owned by W. M. Van Norden, Rye, N. Y. Sir Andrew was champion of the Highland exhibit at the St. Louis World's Fair live-stock show, 1904.

Plate 19.—Highland cattle in New York State.—A group of cows on Mr. Van Norden's place at Rye, N. Y.

^a The offices of the society are at Inverness, Scotland.